## REMARKS

Counsel for applicants thanks Examiner Winner for the courtesy extended on the telephone on August 26, 2003. In light of that discussion, a Declaration under 37 CFR §1.132 of inventor Edward McElmeel is submitted herewith. It is understood from the telephone conversation of August 26, 2003 that such a Declaration would place the case for condition for allowance, and it is respectfully submitted that the Declaration of Mr. McElmeel is sufficient to overcome the basis of rejection set forth in the outstanding Office Action.

The sole outstanding basis asserted for the rejection of claims 1 – 22 is that they are obvious under 35 U.S.C. §103(a) over U.S. patent 616,525 ("Whitney") in combination with prior art power assist steering systems. It is respectfully submitted that such a combination is improper as there is no teaching or suggestion in the prior art to replace the gear mechanisms in prior steering systems with a roller gear, and in fact, one of skill in the art would be discouraged from doing so. This is evidenced by the fact that, in the 100 years since Whitney issued, and the decades that power assist steering systems have been in existence, no such combination has been made or suggested.

One of ordinary skill in the art would be discouraged from using a roller gear in a power assist steering system for a variety of reasons, which are set forth in the application and in Mr. McElmeel's Declaration. Further, the present inventions led to surprising and unexpected increases in power transfer efficiency, contrary to the belief that devices capable of higher torque loads would have lower efficiency. Further, the present inventions were accomplished using standard materials and gears, despite having to meet the unique size, weight and performance demands for vehicular use.

In order to facilitate, rather than hamper, vehicle performance, a vehicle power assist steering system must be small enough to fit into the space in a vehicle engine compartment around the engine, and should also be light weight. The pinion gear used to transfer energy from an output shaft to the assist pinion should also be as efficient as possible. Until the present invention, the increased size, complexity and weight of roller gears with respect to traditional sliding friction worm gears discouraged the use of a roller pinion gear in a vehicle power assist steering system. The prior art is devoid of any teaching of a roller pinion gear that can meet the engineering challenges associated with a vehicle power assist steering system, such as packaging size, weight, complexity, power transfer efficiency, durability, and costs; these challenges discouraged the consideration of a roller gear.

Assumingly solely for the sake of argument that one were to consider the possibility of using a roller gear in a power assist steering system, the substantial engineering challenges mentioned above had to be recognized and overcome to accomplish this, which the prior art does not do. In contrast, the present inventions surprisingly accomplish improved power transfer efficiency in a power assist steering system with a roller pinion gear despite the increased complexity of the roller gear. For example, power transfer efficiency greater than 70% at load torques above 200 in-lbf at 1000 rpm can be achieved with a pinion mechanism for a vehicle power assist steering system using the roller pinion gear of the present invention. The prior art does not teach a gear, pinion mechanism or power assist steering system as recited in the claims. Thus, even assuming solely the sake of argument that the prior art was combined as suggested in the Office Action it would not still not equal the present

invention. It is respectfully submitted that for these reasons alone that the case is in condition for allowance; thus, the Declaration is unnecessary, and is submitted solely for the sake of expediting prosecution.

In view of the foregoing, it is respectfully requested that a Notice of Allowance be issued. In the event this Reply does not place the case in condition for allowance, or if there are matters that can be resolved over the phone to expedite prosecution, it is requested that the Examiner please telephone the undersigned at (408) 971-0627.

Respectfully submitted,

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Date

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